

## **3.0 LAND USE AND COMMUNITY CHARACTERISTICS**

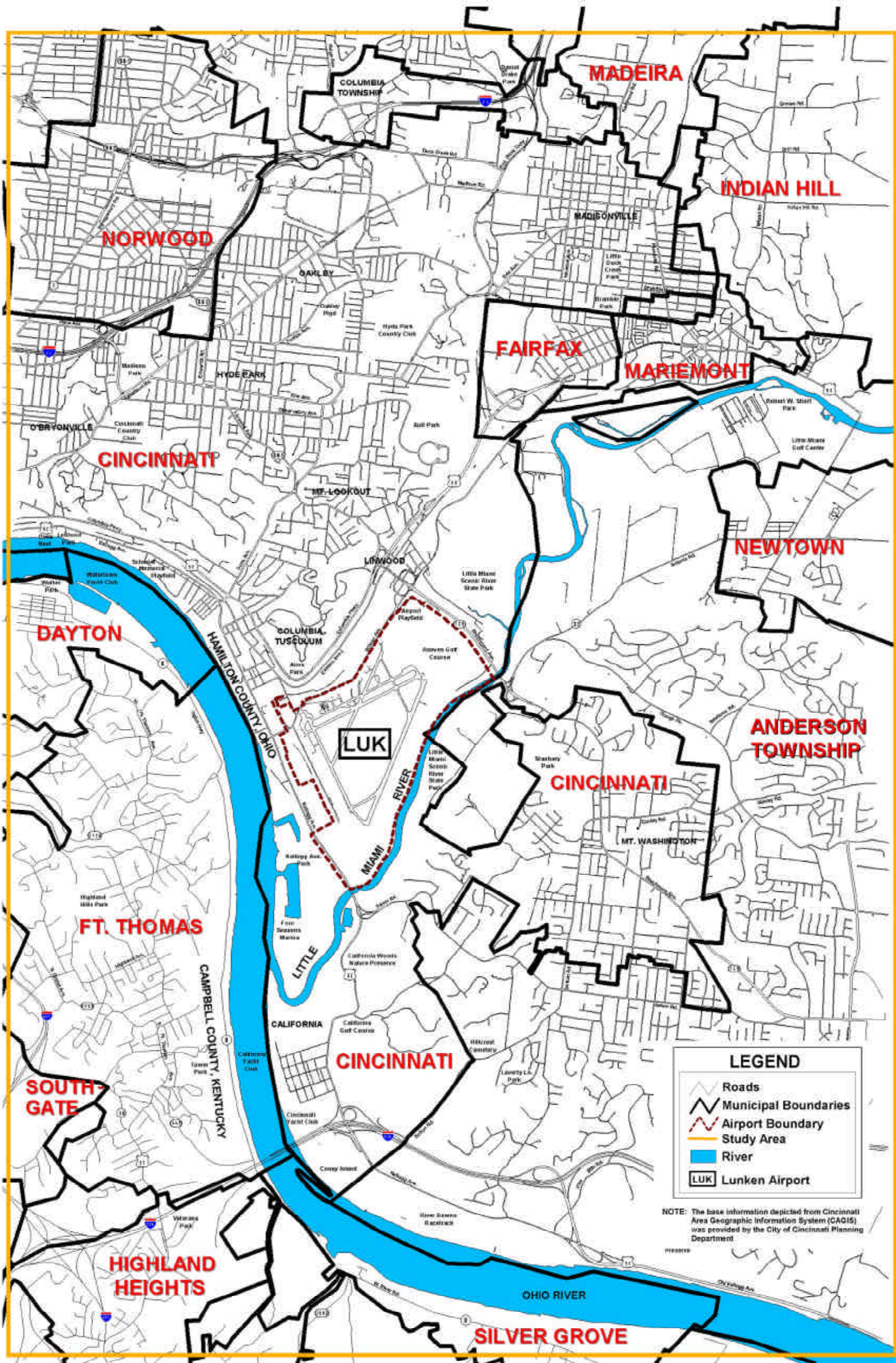
---

Strategies to enhance compatibility between airport operations and surrounding communities are normally developed based on an assessment of current and future land uses around the Airport. Existing land use, noise sensitive community facilities, zoning, and future land use plans in the vicinity of the Airport are examined in this chapter and form the basis for determining noise impacts to specific areas. The Airport property is located within the City of Cincinnati, a political jurisdiction in Hamilton County. However, there are numerous jurisdictions contained within the Airport Study Area, specifically Anderson Township to the east, Northern Kentucky municipalities across the Ohio River to the south and southwest, the City of Cincinnati to the east and west, and the municipalities of Fairfax, Indian Hill, Madeira, and Mariemont to the north and northeast. **Exhibit 3.1-1** depicts the Jurisdictional Boundaries in the area around the Airport.

### **3.1 EXISTING LAND USE**

Identifying existing land use within the vicinity of the Airport is important to the FAR Part 150 Study. To assess those uses that could be identified by the FAA as being “noise sensitive”, the FAA has identified land use compatibility guidelines (using annual day/night average sound levels), relating the various types of land use to degrees of airport noise levels. The guidelines presented in the FAR Part 150 and reproduced in **Table 3.1-1**, set compatibility guidelines for residential, public, commercial, manufacturing and production, and recreational land uses. As demonstrated by these guidelines, all land uses in areas of less than DNL 65 dB are generally considered compatible with airport operations.

Existing land use for the Airport Study Area, depicted in **Exhibit 3.1-2**, was identified from land use information compiled by the Cincinnati Area Geographic Information System (CAGIS). Existing land use in the Airport Study Area but located in Northern Kentucky was compiled from digital orthophotographs, road and building files. Land uses within the study area were generalized and mapped in terms of the following classifications: Agriculture, Commercial, Industrial, Park/Recreational/Institutional, Residential, Unclassified, and Undeveloped.



JULY, 2003

2000 0 2000 4000 Feet

N



CINCINNATI MUNICIPAL-  
LUNKEN AIRPORT  
PART 150 STUDY

JURISDICTIONAL BOUNDARIES

EXHIBIT  
3.1-1

### 3.0 LAND USE AND COMMUNITY CHARACTERISTICS

**TABLE 3.1-1**  
**LAND USE COMPATIBILITY WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS\***

Land Use	Yearly Day-Night Average Sound Level (DNL) in Decibels					
	Below 65	65-70	70-75	75-80	80-85	Over 85
<b>Residential</b>						
Residential, other than mobile homes and transient lodgings	Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N <sup>1</sup>	N <sup>1</sup>	N <sup>1</sup>	N	N
<b>Public Use</b>						
Schools	Y	N <sup>1</sup>	N <sup>1</sup>	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	Y <sup>4</sup>
Parking	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
<b>Commercial Use</b>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	Y <sup>4</sup>	N
Communication	Y	Y	25	30	N	N
<b>Manufacturing and Production</b>						
Manufacturing, general	Y	Y	Y <sup>2</sup>	Y <sup>3</sup>	N	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y <sup>6</sup>	Y <sup>7</sup>	Y <sup>8</sup>	Y <sup>8</sup>	Y <sup>8</sup>
Livestock farming and breeding	Y	Y <sup>6</sup>	Y <sup>7</sup>	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<b>Recreational</b>						
Outdoor sports arenas and spectator sports	Y	Y <sup>5</sup>	Y <sup>5</sup>	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables	Y	Y	25	30	N	N

Source: Federal Aviation Regulations 14 CFR Part 150, effective January 18, 1985.

Key to this Table:

SLUCM = Standard Land Use Coding Manual

Y(Yes) = Land Use and related structures compatible without restrictions.

N(No) = Land Use and related structures are not compatible and should be prohibited.

NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35 = Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.

<sup>1</sup> Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

<sup>2</sup> Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas or where the normal noise level is low.

<sup>3</sup> Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas or where the normal noise level is low.

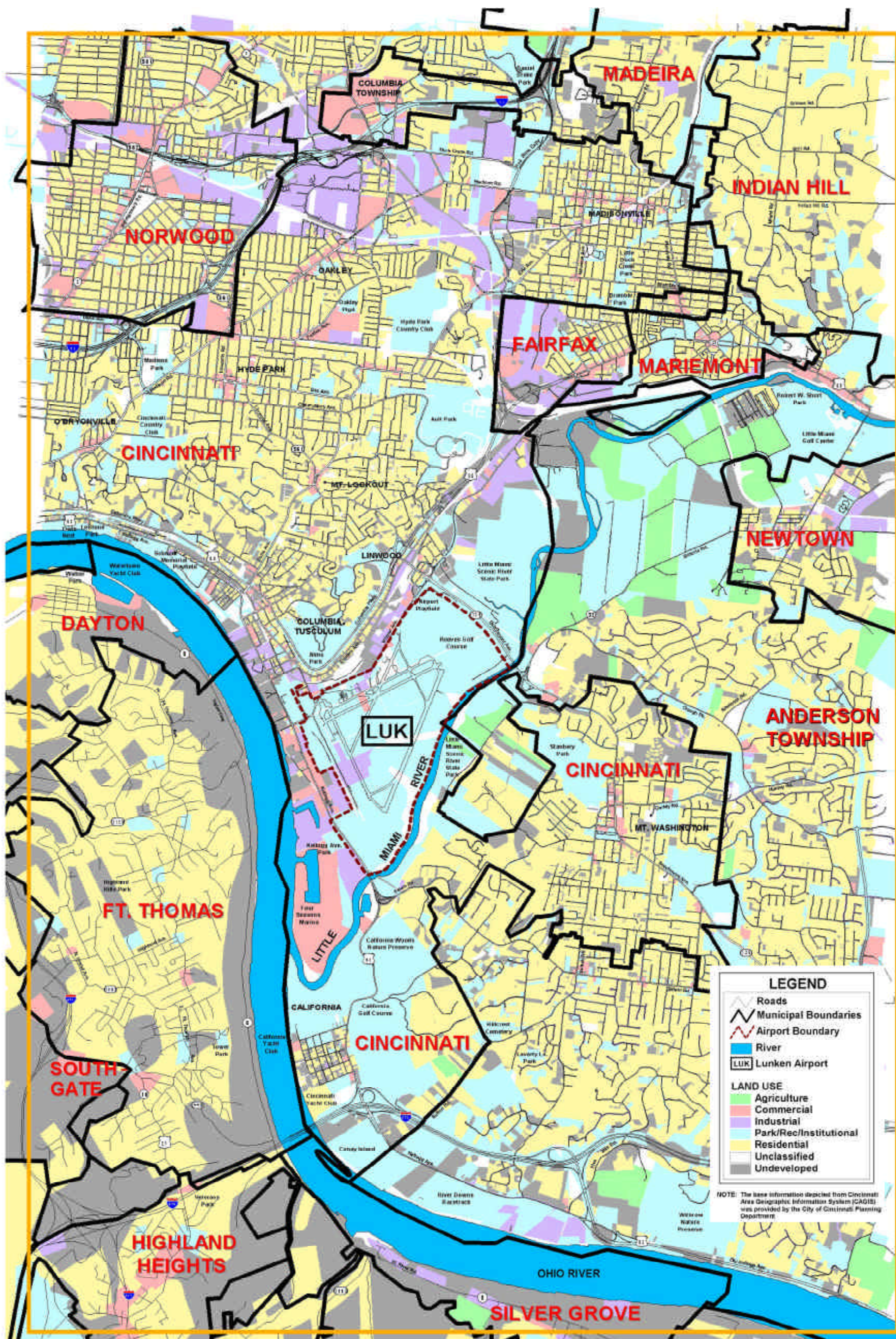
<sup>4</sup> Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas or where the normal level is low.

<sup>5</sup> Land use compatible provided special sound reinforcement systems are installed.

<sup>6</sup> Residential buildings require an NLR of 25. <sup>7</sup> Residential buildings require an NLR of 30.

<sup>8</sup> Residential buildings not permitted.

\* The designations contained in this table do not constitute a federal determination that any use of land covered by the program is acceptable or unacceptable under federal, state, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land uses.



JULY, 2003

2000 0 2000 4000 Feet

N



CINCINNATI MUNICIPAL-  
LUNKEN AIRPORT  
PART 150 STUDY

EXISTING LAND USE PLAN

EXHIBIT

3.1-2

**3.1.1 Agriculture**

The majority of the areas in this land use category are associated with the Little Miami River Valley, northeast of the Airport in Anderson Township.

**3.1.2 Commercial**

There are pockets of commercial land use scattered around the Airport, including a restaurant located on airport property. The largest concentration of commercial land use occurs to the west and northwest of the Airport dispersed along Wilmer Avenue and Columbia Parkway, and to the south along Kellogg Avenue (including the Four Seasons Marina along the Little Miami River). Other commercial land use areas are centered in neighborhood business districts and along arterial routes.

**3.1.3 Industrial**

The majority of the existing industrial land uses in the immediate vicinity of the Airport are concentrated along Kellogg Avenue to the south; and associated with Eastern Avenue and Wilmer Avenue to the west and north. The Village of Fairfax has a large area of industrial land use located approximately 12,000 feet (over two miles) north of the Airport runways.

**3.1.4 Parks, Recreational, and Institutional**

The second most abundant land use category in the Airport vicinity is classified as Parks/Recreation/Institution. This combined category includes parks, golf courses and nature preserves in the study area, in addition to institutional uses. The Airport is classified within this category. A large corridor of this land use follows the Little Miami River and extends southward along the Ohio River. Some of the areas closest to the Airport include:

- Little Miami Scenic River State Park located to the north and east of the Airport
- California Woods Nature Preserve located to the south of the Airport
- Alms Park located to the west of the Airport

### **3.1.5 Residential**

The closest and most likely neighborhoods to be affected by daily airport operations include:

- Cincinnati neighborhoods of Mt. Lookout, Linwood and Columbia Tusculum, located up to 2,000 northwest of the Airport
- Cincinnati neighborhood of East End, Mt. Washington and Anderson Township, located east of the Airport
- The Villages of Fairfax, Indian Hill, Mariemont, the City of Madeira, and the Cincinnati neighborhood of Madisonville located over 10,000 feet northeast of the Airport
- Cincinnati neighborhood of California and the City of Highland Heights, Kentucky, located south of the Airport
- City of Ft. Thomas in Northern Kentucky across the river to the southwest of the Airport

### **3.1.6 Unclassified/Undeveloped**

The areas in this land use category are widely scattered throughout the study area. Some of the larger concentrations are located northeast of the Airport, west of the Airport along Eastern and Kellogg Avenues, and along the southern edge of the Ohio River corridor in Northern Kentucky. The band of undeveloped area along the Kentucky side of the Ohio River corridor can be attributed to the steep slope conditions.

### **3.1.7 Community Facilities**

Community facilities such as churches, schools, and hospitals are considered compatible with annual day-night average sound levels of less than DNL 65 dB (refer to Table 3.1-1). If these facilities are located in an incompatible area, there are noise mitigation measures that can be incorporated into the structure to attain compatibility. As

shown on the **Exhibit 3.1-3** and listed in **Table 3.1-2**, there are many community facilities located within the study area. These facilities were organized into several categories including: churches, daycare facilities, golf courses/country clubs, libraries, parks, and schools. Of these categories, golf courses and parks are considered compatible with noise levels higher than 65 DNL. The closest noise sensitive community facilities, located within a 10,000 foot radius of the Airport, include:

- McKinley Elementary School located in Cincinnati approximately 3,000 feet to the west
- Linwood Academy located in Cincinnati approximately 4,000 feet to the north
- Mt. Washington Baptist Nursery School located in Cincinnati approximately 8,000 feet to the east
- Hamilton County Public Library, Mt. Washington Branch, located in Cincinnati approximately 9,000 feet to the east

### **3.1.8 Zoning**

Zoning ordinances represent a state provided police power to local governments that are primarily used to promote land use compatibility in a given area. Generally, zoning codes/ordinances were put in place to promote public health, safety, and welfare through the regulation of the following:

- The location, height, bulk, number of stories, and size of buildings and other structures
- The percentages of lot areas that may be occupied, set back building lines, and size of yards
- Density of population
- Uses of buildings and other structures
- Uses of land for trade, industry, residence, recreation, or other purposes

Each of the jurisdictions within the study area has a unique classification system in place. For the purposes of this Study, the zoning categories were generalized into five categories:

- BUSINESS, including retail and commercial businesses
- INDUSTRIAL, including manufacturing



### 3.0 LAND USE AND COMMUNITY CHARACTERISTICS

<b>TABLE 3.1-2</b> <b>Cincinnati Municipal-Lunken Airport</b> <b>COMMUNITY FACILITIES IN THE STUDY AREA</b>		
City, Township, or Village	Facility	ID Number
<b>Ohio</b>		
Anderson Township		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	Coldstream Country Club	A1
	Indian Valley Golf Course	A2
	Little Miami Golf Center	A3
Libraries	N/A	N/A
Parks	Robert W. Short Park	A4
	Lavery Ln. Park	A5
	Withrow Nature Preserve	A6
Schools	N/A	N/A
City of Cincinnati		
Church	Cincinnati Bible Way Church	C1
	Fifth Christian Church	C2
	Freedom of Worship Baptist Church	C3
	Gaines United Methodist	C4
	Greater Harvest Missionary Church	C5
	Greater Liberty Baptist Church	C6
	Lee Chapel A.M.E. Church	C7
	Mt. Carmel Baptist Church	C8
	New Life Temple	C9
	New Mission Baptist Church	C10
	Phillipian Baptist Church	C11
	St. Anthony Catholic Church	C12
	St. Andrews Episcopal Church	C13
	St. Luke A.M.E. Church	C14
	Trinity Baptist Church	C15
Daycare Centers	Hyde Park Community U.M.C. Nursery School	C16
	Hyde Park Early Childhood Education Project	C17
	Hyde Park Play School	C18
	Hyde Park Toddler Enrichment Group	C19
	Knox Pre-School	C20
	Lee Chapel A.M.E. Church School & Day Care Center	C21
	Montessori Center Rooms	C22
	Mt. Washington Baptist Nursery School	C23
	Mt. Washington U.M.C. Child Enrichment Center	C24
	New Horizons	C25
	Presbyterian Pre-School serving Mt. Washington	C26
	Redeemer Nursery School	C27
	YMCA Child Care @ AWL School	C28
	YMCA Child Care @ Eastwood Paideia School	C29
Golf Courses	California Golf Course	C30
	Cincinnati Country Club	C31
	Hyde Park Country Club	C32
	Reeves Golf Course	C33
Libraries	Hyde Park Branch	C34
	Keith W. & Margaret Baldwin Library	C35
	Madisonville Branch	C36
	Mt. Washington Branch	C37
	Oakley Branch	C38

### 3.0 LAND USE AND COMMUNITY CHARACTERISTICS

<b>TABLE 3.1-2(continued)</b> <b>Cincinnati Municipal-Lunken Airport</b> <b>COMMUNITY FACILITIES IN THE STUDY AREA</b>		
<b>City, Township, or Village</b>	<b>Facility</b>	<b>ID Number</b>
Parks	Airport Playfield "Land of Make-believe"	C39
	Alms Park	C40
	Anderson Park	C41
	Ault Park	C42
	Bramble Park	C43
	California Woods Nature Preserve	C44
	Daniel Drake Park	C45
	Kellogg Ave. Park	C46
	LeBlond Park	C47
	Linwood Playfield	C48
	Little Duck Creek Park	C49
	Little Miami Scenic River State Park	C50
	Madison Park	C51
	Oakley Playground	C52
	Owls Nest Park	C53
	Riverstar Ballpark	C54
	Schmidt Memorial Playfield	C55
	Stanbery Park	C56
Schools	Clark Montessori	C57
	Hyde Park	C58
	Kilgour	C59
	Linwood Academy	C60
	McKinley	C61
	Mt. Washington Elementary	C62
	Withrow High School	C63
Village of Fairfax		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	N/A	N/A
Libraries	N/A	N/A
Parks	N/A	N/A
Schools	N/A	N/A
Village of Indian Hill		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	N/A	N/A
Libraries	N/A	N/A
Parks	N/A	N/A
Schools	N/A	N/A
City of Madeira		
Church	N/A	N/A
Daycare	N/A	N/A
Schools	N/A	N/A

### 3.0 LAND USE AND COMMUNITY CHARACTERISTICS

<b>TABLE 3.1-2 (continued)</b> <b>Cincinnati Municipal-Lunken Airport</b> <b>COMMUNITY FACILITIES IN THE STUDY AREA</b>		
<b>City, Township, or Village</b>	<b>Facility</b>	<b>ID Number</b>
Village of Mariemont		
Church	N/A	N/A
Daycare	N/A	N/A
Libraries	Mariemont Branch	VM1
Parks	Dale Park	VM2
	Dogwood Park	VM3
	Mariemont Concourse	VM4
Schools	N/A	N/A
Village of Newtown		
Church	N/A	N/A
Daycare	N/A	N/A
Schools	N/A	N/A
City of Norwood		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	N/A	N/A
Libraries	Norwood Branch	CN1
Parks	Burwood Park	CN2
	Dorl Field	CN3
	Tower Park	CN4
	Victory Park	CN5
	Waterworks Park	CN6
Schools	N/A	N/A
<b>Kentucky</b>		
Dayton, KY		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	N/A	N/A
Libraries	N/A	N/A
Parks	Walter Park	D1
Ft. Thomas, KY		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	N/A	N/A
Libraries	N/A	N/A
Parks	Highland Hills Park	FT1
	Tower Park	FT2
Highland Heights, KY		
Church	N/A	N/A
Daycare	N/A	N/A
Golf Courses	N/A	N/A
Libraries	N/A	N/A
Parks	Veterans Park	H1

Source: PB Aviation

- OPEN SPACE, including conservation and river preservation areas (in Northern Kentucky) and excavation, landfill, and protected riverfront areas (in Ohio)
- RESIDENTIAL, including all densities of residential

**Exhibit 3.1-4** depicts the generalized zoning within the study area. The majority of the study area surrounding the airport is zoned residential including areas located immediately to north, northwest, south, and southeast of the runways. The business zoning category, which includes the Airport, extends to the south along Kellogg Avenue; to the west up to Eastern Avenue; and continues north along Wilmer Avenue toward and into the Village of Fairfax. The office zoning category in the Airport vicinity is also associated with Kellogg, Eastern, and Wilmer Avenues. Small pockets of industrial zoning occur throughout the study area, but none are in the immediate vicinity of the Airport. There is a large area of open space zoning located east and northeast of the Airport within the Little Miami River Valley.

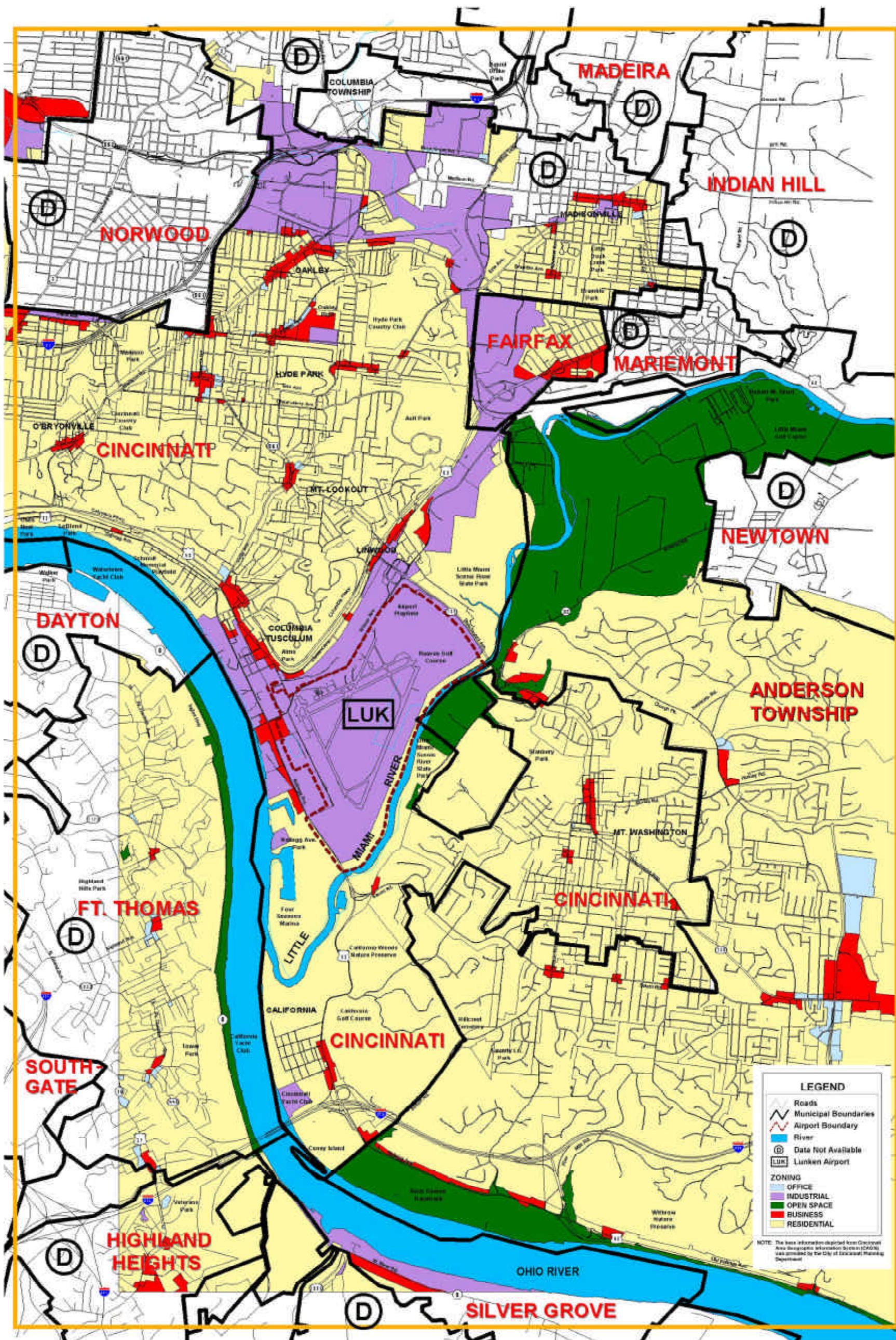
### **3.1.9 Planned Land Use**

Land use and development controls based on a compatible land use plan are among the most effective and affordable compatibility strategies. This is particularly true when the land is still being developed. The exercise of these land use controls is within the authority of local or county governments rather than the airport operator. On the Kentucky side of the Ohio River, the cities of Dayton, Ft. Thomas, and Highland Heights all have comprehensive plans in place. On the Ohio side, within the immediate Airport vicinity, only the Village of Fairfax had limited planning documents available at the time of this writing. The following are summaries of the various comprehensive planning strategies that might pertain to compatible land use issues.

### **3.1.10 Fairfax, Ohio**

The Village of Fairfax does not have a formal community wide plan; however, a series of assessment plans (December 2000) discuss the potential revitalization of two major corridors located within the Village limits: Red Bank Road and Wooster Pike.

3-13



JULY, 2003

2000 0 2000 4000 Feet



CINCINNATI MUNICIPAL-  
LUNKEN AIRPORT  
PART 150 STUDY

ZONING MAP

EXHIBIT  
3.1-4

These areas are located north of the Airport. Red Bank Road is a mixed-use corridor with an area of approximately 70 acres in size, predominantly made up of manufacturing and wholesale or distribution uses. However, according to the Red Bank Road Corridor assessment (December 2000) there are numerous buildings located along the corridor that are either vacant or underutilized. The assessment plan recommends considering future zoning changes to allow for mixed-use redevelopment, including high density residential, community services, and a multi-modal transportation facility. Wooster Pike is a retail district spanning 0.86 miles between the Mariemont Corporation line and Meadowlark Lane. The goal of the Village's Wooster Pike Revitalization Plan (September 2000) is to promote the redevelopment of blighted and underutilized properties within the Wooster Pike study area into a retail destination made up of retail, office, and institutional uses. Development of a "destination attraction use", i.e. a family restaurant or small shopping plaza, is identified as the anchor for redevelopment. The plan also includes potential inclusion of an elderly nursing home facility, an elderly housing facility, or an institutional use.

#### **3.1.11 Ft. Thomas, Kentucky**

The Comprehensive Plan update for Ft. Thomas, Kentucky (Revised 1999), recommends:

- Encourage higher densities of mixed-use development in the following districts:
  - **Town Center** the area surrounding the Ft. Thomas Avenue and Highland Avenue intersection
  - **Midway** the area surrounding the Veteran's Administration Hospital
  - **Inverness** located at the intersection of Ft. Thomas Avenue, Memorial Parkway, Rob Roy Avenue, and Sterling Street
- Protect environmentally sensitive green/open spaces (such as the undeveloped riverfront hillsides) through the development of a trail and passive recreation plan
- Encourage the continued development of the Highland and Grand Avenue intersection as a niche business district

#### **3.1.12 Highland Heights, Kentucky**

The Comprehensive Plan update for the City of Highland Heights, Kentucky (Revised 2000), acknowledges the City of Highland Heights existing as a mature,

developed community with a minimal amount of undeveloped land area remaining for potential development. The focus of the Plan is to outline a strategy for land use change with respect to the “development” of currently undeveloped land areas and the “re-development” of three keys areas in the City. Two of these areas are located within the study area south of the Airport runways:

- Gate West – adjacent to I-471, US 27, and NKU is currently zoned Residential R-1E and its current land use is in low-density land uses. This area is planned to include a hotel/conference center complex, mid-rise office and/or medical complex, and a mixed-use development including office, limited retail and general business uses.
- Gateway East – adjacent to I-471, US 27, and NKU (opposite Gateway West) is currently zoned Residential R-1E (P) and a small portion in General Commercial and its current land use is used by several single-family homes and a commercial establishment. A significant portion of this area is also undeveloped including wooded hillside land. This area is planned to include an office campus-type development, mixed-use development (including commercial and business services), and residential multi-family development for condominium and rental units, and open space/buffers.

### **3.1.13 Dayton, Kentucky**

The Comprehensive Plan update for Dayton, Kentucky (Revised 1998), described itself as a developmentally mature city with minimal remaining vacant land. Otherwise vacant lands located within the city limits are restrictive for development due to physical limitations such as steep topography or location in a floodplain. Due to these limitations, the City addresses its growth needs generally by either means of redevelopment and development of small vacant parcels for new development. The area located along the east side of Vine Street between Main Street and Clark Street, represents the one of the two areas the City of Dayton recommended to be changed from Industrial to Residential (as a result of the development of the Dayton Industrial Park). A parcel located south of Watertown Marina, east of the flood levee, and north of KY 8 is designated as a “Special Development Area”, and is recommended for high-density residential use with supporting commercial uses.